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To the Office of the National Coordinator HIT Policy Committee
Meaningful Use Workgroup on July 29, 2010

On behalf of both ASTHO and JPHIT I begin by applauding the wisdom of Congress for making population health improvement an integral part of the HITECH structure of goals and incentives. We especially thank the members of the HIT Policy and Standards Committees, their workgroups, and ONC staff, for their enormous labor, understanding and responsiveness. Without these and your sense of urgency and importance we would have seen but a tiny fraction of the progress made to date.

I have been asked to address progress to date in the achievement of “meaningful use” of health information technology for population health improvement and what lessons it may hold for both implementation of Stage 1 meaningful use, and for setting appropriate targets for Stages 2 and 3.

The Policy Committee, ONC and CMS staff chose wisely the three population health elements for Stage 1. Immunization information systems support vaccination, one of the most effective evidence-based public health interventions. This meaningful use element leverages considerable infrastructure built up in immunization registries over the past 15 years. Similarly, communicable disease reporting to enable prompt public health case management has been a core public health activity for over a century. The effort to convert these processes to standardized electronic reporting and case management systems has been underway for over a decade. Finally, syndromic surveillance (that is, seeking aberrations in the rates of presenting signs and symptoms of disease to detect outbreaks in advance of laboratory- or physician-confirmed disease reports) has grown increasingly common and important since the specter of a terrorist biological attack has grown more plausible over the last decade. Because syndromic surveillance relies heavily on raw clinical information, linking it to electronic record systems and to health information exchanges is both timely and necessary. There is real reason to expect improvements to information flow in these three areas to pay off over the years in improved public health and safety.

From a state standpoint, Wisconsin feels well-positioned to participate and to benefit from these changes.

- The Wisconsin Immunization Registry already collects information on over 90% of young children from a very broad spectrum of providers, and reliably and securely manages information on more than six million people. Thousands of providers today can see at a glance which of their patients are lacking vaccines, and use the system to generate reminders to their patients.

- This month Wisconsin celebrated achieving 100% participation by local and tribal public health authorities in the Wisconsin Electronic Disease Surveillance System for managing communicable diseases reports. They benefit from rapid Electronic Laboratory Reporting from 19 of the largest volume laboratory reporters, with at least eight other laboratories waiting to be brought online.
- Syndromic surveillance with data from the Wisconsin Health Information Exchange served us well during the influenza H1N1 pandemic. WHIE data (that allowed us to see that high rates of emergency room visits were not accompanied by high hospitalization rates) helped inform a decision whether closing a major metropolitan school district in the early days of the pandemic was warranted, a decision with economic consequences of at least tens of millions of dollars. Reporting to WHIE is expected by month's end to include 41 hospitals, 43 emergency departments, and over 135 ambulatory practice sites across 24 counties.
- The Division of Public Health is home to Wisconsin's Health Information Technology coordinator and is heavily engaged in the state-level Health Information Exchange cooperative agreement and Medicaid implementation planning.
- It is too early to state with confidence how Wisconsin's Regional Extension Center will serve the needs of population health meaningful use. Similarly, we are uncertain to what extent the ONC-funded HIT curricula to be offered through Wisconsin community colleges will address the needs of public health informaticians and the necessary changes to public health systems for Stage 1 meaningful use and beyond. However, representatives of the Department of Health Services are keeping us connected to these projects as best as their limited time allows, which is less than optimal.
- The Division of Public Health has been deeply involved with two BEACON Grants submitted to date (one unfunded and the other pending) and one unfunded SHARP application. The competitive nature of these opportunities means that only a small number of public health agencies are likely to be directly involved with either program nationwide, thus we hope that lessons learned will be rapidly and widely disseminated.
- Wisconsin looks forward to learning more about how both the NHIN limited participation partnership and NHIN Direct will serve the needs of public health oriented information exchange. We note with concern, however, that population health meaningful use items were not among those addressed in the first set of NHIN Direct foci. Nor is it clear to us how new activities like NHIN Direct will interact with established transmission modalities like the Public Health Information Network Messaging System, which has a large user base among public health agencies; or with implementation profiles like those created by Integrating the Healthcare Enterprise (IHE) which has included several exchange profiles of great interest to public health.
- There is a real price to creating incentives around a limited set of standards. Today, for example, about 85% of immunization records enter WIR by electronic batch or messaging, but only a modest subset of these use standards endorsed in the recent final rule. Thus many providers for whom we currently receive data will presumably request to change their method of transmission, while many other new providers will also be urgently requesting access. We hope that the short term stresses of transitioning already-participating providers to the HITECH standards will provide some long-term payoff in interoperability, but it will be a demanding task.

- Finally, we note that increased volume of incoming data from electronic reporting results in increased workflows to the public health workforce. (Studies from New York and Indiana have documented considerable increases in reporting volumes with the adoption of electronic laboratory reporting.) At the same time we that we will be working harder to create “sockets” for meaningful use-related information, both state and local health departments will also have to invest in more workers, improved workflow, or both, to deal with the increased workload. Surveillance systems work best when reporting is more complete, but at a cost.

Thus I can state with assurance that Wisconsin has electronic information systems that stand to be affected in from the future information envisioned by HITECH meaningful use Stage 1. Many of the changes may be difficult to adjust to in the short term even if they offer long-term benefit.

I am sorry to report that there is no system or application in place in Wisconsin, nor in many states, that integrates these and other data streams in a real-time, user-friendly way to serve the front-line needs of public health nursing and other programs. In other words, there is no “person-centric public health EHR” that today could toggle from an individual’s communicable disease case report to the same individual’s immunization record. (In Wisconsin we do enjoy a person-centric EHR system (the Secure Public Health Electronic Record Environment, or SPHERE) that combines several *other* data types, including vital records, maternal child health program, and WIC program information, however.) Nor can we today merge person-centric information in our Division’s possession to serve to personal healthcare clinicians at their point of service. Such models exist, for example the Utah CHARM program (Child Health Advanced Record Management). Utah has linked their Vital Records (birth and death), Immunization Information System, Newborn Hearing Screening and their early intervention program data, with plans to add child data from other sources as well. Wisconsin too has crafted plans for such systems, but they languish for want of funding. These are definitely part of our future vision, but they are not currently supported financially by the HITECH structure of incentives and grants. (Although it is sometimes stated that state HIE cooperative agreement funds should be used to support public health involvement in and leverage of health information exchange, these federal funds are estimated to cover only a portion of needed core services in Wisconsin, such as provider and patient directories and record locator services, and thus are unlikely to be used for government agencies’ internal data systems.)

Nor should Wisconsin’s current readiness lead to overly-optimistic conclusions. For example, work on the immunization registry began about fifteen years ago, overcoming several near-death experiences over the years. Similarly, WEDSS has been under development since about 2000, with several notable reversals of fortune along the way. (Indeed our earlier-than-expected achievement of 100% participation was accelerated by the unhappy but highly motivating demands of managing pandemic influenza H1N1, which fortuitously occurred just AFTER a major server and version migration!) Compare these timelines with the rapidity of the HITECH implementation and one might ask if there is a gap between expectations and reality. Also, Wisconsin is

in some rather exclusive company. WIR is one of only 19 immunization information systems across the nation to have achieved such high participation rates. We have developed seven methods of receiving immunization data to accommodate different providers' needs. Thus, for several reasons, looking only at the current status in Wisconsin might lead to undue confidence that meaningful use will effect change uniformly across the nation. The capability of the public health system in the United States to participate fully and to benefit from the new data streams is still very uneven and inadequate.

We understand and appreciate that change-oriented goals like HITECH's must create, and then resolve, such gaps between expectations and reality. We endorse the goals as valuable and do not wish to stand away from them. The problems public health agencies face are not due to inherent lack of initiative or intelligence, but because of some concrete historical obstacles. These obstacles have not always been carefully enunciated or addressed, and unless this is done, some level of disappointment may follow.

As the Policy Committee seeks to assess the success of Stage 1 and to prepare for Stages 2 and 3, they should keep in mind the following realities faced by public health agencies, and consider implications for national policy.

- **A bottoms-up and fragmented enterprise:** Because the Constitution delegated police powers to states (and many states delegate it to local authorities), the nation's public health system is built from the ground up. No single authority, not even CDC or the Department of Health and Human Services, has command and control authority over nearly 3000 local health departments. Many reporting requirements are based in local or state statutes or rules, and thus resistant to national standardization. Many local health departments are tiny with virtually no informatics capabilities. State health departments represent a crucial link between the local work of public health, and national and global public health protection systems. The bottoms-up principle is not an unmixed curse, because it tends to reinforce relationships between local public health agencies and local health care providers, but it has retarded efforts to standardize and streamline information flow. The fragmentation of information flows is significantly aggravated by the extent to which categorical vertical (Federal to state or local public health) funding streams and information management requirements have created siloed information systems that represent semi-autonomous and un-integrated information city-states. These forces, that cannot simply be wished away, inhibit interoperability horizontally and vertically.

Implications and recommendations:

- The unprecedented demands for public health systems to plan and act as a unified information enterprise for the purposes of health system transformation led to the creation in 2008 of the Joint Public Health Informatics Taskforce (JPHIT). JPHIT links Federal agencies to a coordinating body of associations and staff serving state and local health departments and the many information-

dependent functions within them, like laboratory, epidemiology, vital records, and health care data systems. Only very recently did funding permit this group to establish a secretariat. JPHIT is now mobilizing a high-level summit on Stage 1 meaningful use to ensure that all parties (Federal, state and local agencies and their associations) are working from a unified understanding of the rules, are dividing work among themselves to minimize redundant labor, and to solve problems too large for single entities to solve by themselves. We hope to benefit in this process from white papers and summits currently being organized on each of syndromic surveillance, electronic laboratory reporting and immunization registry systems in the age of meaningful use. ONC and other federal agencies should also regularly use JPHIT as a clearinghouse and sounding board so as to receive feedback that is considered from all the angles, and not just one or another facet of the public health enterprise. Further strengthening of this task force and increased staff resources to help define, research and facilitate the resolution of urgent issues, like getting ready for meaningful use Stage 1 is critical. CDC is responding to this need at least in part, through cooperative agreements with the JPHIT Secretariat and its members.

- Federal public health programs must work aggressively to harmonize standards for program information systems such that they become interoperable.

- **Information architecture fragmentation:** different programs in public health agencies have different levels of information technology capabilities and, as noted, conflicting requirements imposed by program-specific funding sources. These disparities and fragmentation are perpetuated by the absence of a unifying public health information architecture that could help define a migration roadmap for local, state, and federal agencies toward interoperable information use across many different public health program systems.

Implications and recommendations:

- Such an architecture is best designed collaboratively in collaboration with entities like JPHIT to help ensure the requirements of many different public health program areas are addressed. JPHIT and federal agencies should work together to develop the architecture and forward-looking migration roadmap that helps many different public health information programs converge in an orderly way on standards for interoperability. Establishing standards for meaningful use one-at-a-time at short notice does not provide the necessary timeframe or sense of direction for planning that might allow investments in one use case to carry over to many public health use cases..

Resource shortages: Public health and prevention consume only about 2 cents of the nation's health dollar. Tax rebellions, competition with entitlement programs,

and recession have seriously eroded real budgets of most local and state public health entities. 2/3 of local health departments serve populations under 50,000 with budgets under \$500,000. Even near the peak of post 9/11 funding for Public Health Emergency Preparedness (a major source of public health informatics funding) CDC extramural spending on information technology and informatics was about \$167 per state and local public health worker. Even if state and local funding were three times as much (which I doubt), the combined total of \$668 per worker/year compares to contemporary spending of \$3,047 in health care, \$6,918 in all industries, and \$14,764 in banking. The Public Health Emergency Preparedness grants are now being reduced each year. While HITECH has made \$34 billion available to hospitals and health care providers, only about \$26 million total in HITECH funds will go to state health agencies to prepare their immunization information and electronic laboratory reporting systems for meaningful use (and this funding will reach only about 25 grantees each). Coincident with HITECH, recession-related revenue reductions and entitlement needs are further decimating public health agency budgets. According to ASTHO's 2010 budget cut survey data 40% of states have resorted to layoffs and 42% have eliminated entire programs to reduce costs in FY10. A similar NACCHO survey found that 46% of local health departments (serving 73% of the US population) have experienced layoffs, furloughs or cuts in late 2009.

Implications and recommendations:

- Greater funding must be made available to assist states ready their systems, possibly using the Prevention and Public Health Fund. Careful stewardship of that fund should ensure that it addresses real and increasing deficits in the nation's public health infrastructure.
- **Workforce shortages:** The recognized need for health informatics workforce is more extreme in public health, since many informatics and health information technology professionals have little understanding of public health functions or needs. Often one or two people in a state health department must be responsible for network administration, new system implementation, project management, lifecycle management, training, monitoring relevant Federal and state laws, and participating in discussions on the creation or adoption of standards and implementation profiles. This is untenable. Workforce shortages force Wisconsin to submit system upgrades and new projects to severe triage, and participation in standards and implementation profile committees has been impossible to sustain.

Implications and recommendations:

- Increase funding for public health informatics training, including mid-career training for public health professionals. Establish expectations on HIT training and extension centers to help address public health workforce needs and to extend that workforce with technical assistance.
- Fund at least one full-time position in each state and territorial health department to supervise the migration toward interoperability. These individuals should also communicate regularly as a group, and be

deployed across standards and implementation profile development organizations in a complementary (non-redundant) fashion. These individuals can keep the entire community of their peers up-to-date on developments and help ensure meaningful public health practice input into each prior to balloting.

- **Difficulty tracking, interpreting and contributing to rapid change:** At the time I am writing these remarks, I have still not had a chance to thoroughly read the recently issued meaningful use final rules. For most of us at the state and local level, public health informatics is actually a very modest part of our overall job (related to resource and workforce shortfalls described above). However, neither has ONC issued detailed guidance, training or even written answers to questions related to the needs of public health agencies, even though these agencies will play a very important role in meaningful use.

Implications and recommendations

- ONC should have an individual assigned to be accountable for receiving and interpreting questions and comments from public health and to provide easy access to information tailored to the needs of the public health community. Given the need to coordinate closely over time with the Centers for Disease Control and Prevention (CDC), consideration the use of a CDC assignee for this role should be considered.

- **Population health as opposed to public health:** Many organizations serve populations (for example, insurers, community health centers, hospitals, school-based clinics, employee health). But only local, state and Federal public health agencies have a permanent mandate and explicit authority to serve and protect *entire* populations inside their jurisdiction. These agencies will be there long after private voluntary or grant-funded initiatives have been forgotten.

Implications and recommendations:

- Meaningful use should encourage all providers to innovate and improve population health outcomes, but should continue to explicitly acknowledge and support the unique role of public health agencies. The significance of removing the term “public health agency” from the Stage 1 surveillance significant use standard is unclear, but it raises the question of whether private entities are envisioned as replacing the role of public health authorities, and whether that is a sustainable, reliable model for long-term public health improvement.

I have emphasized many obstacles confronting full public health participation in health information exchange, meaningful use and in making the increased access to information serve better public health outcomes. This emphasis is not to argue that the current approach to meaningful use is wrong, or that public health agencies are not anxious to participate, but only to help the Working Group understand how these obstacles may need to be addressed for optimal outcomes.

Despite these challenges, we hope the Policy Committee and ONC continue its aggressive drive toward establishing and expanding meaningful use. We believe that the general direction set in the July 19, 2009 recommendations should be pursued. In particular:

- As state-level HIE establishes better provider directories, these directories should permit urgent public health alerts to be delivered to providers, preferably within the Electronic Health Record environment where providers will increasingly be spending their time (as opposed to other systems like fax and email that may become increasingly neglected).
 - At some point in the future (but not necessarily by 2015) public health alerts could be coded to establish their relevance to certain classes of patients (for example, air quality alerts may be of particular interest to patients with asthma, chronic lung disease and congestive heart failure). Such “tagged” alerts could then be utilized by providers in connection with their disease registries or clinical decision support systems.
- Providers should receive information that permits them to identify which of their patients may lack a complete set of vaccines.
- Create the capacity to link de-identified surveillance information to individual patients or providers when legally authorized.
- Improve coordination of care by sharing care summaries. We hope with time this will expand to include public health nurses, home visiting programs, chronic disease management programs and other public and population health case management, ideally supported by some funding.
- We support the envisioned evolution of personal health records and messaging between providers and patients. Public health agencies and other population health practitioners could also interact with personal health records and disease registries (as authorized by individuals), to provide personalized preventive information and services and for urgent personalized public health alerting regarding hazards for which individual patients might be at particular risk.

Such use cases are stimulating and fun to imagine, but future stages of meaningful use should first be assessed by the following criteria in addition to many that have already been proposed by others:

- The population and public health implications of *each* meaningful use case should be explored, to maximize the population benefit from each one
- Pay particular attention to high-volume transactions
- Successful working models of a use case should already exist prior to national adoption. Increased funding for public health and population health pilot projects and their evaluation can increase the number of options to choose from.
- Selection of standards should be sensitive to legacy systems so as to avoid unnecessary rip-and-replace efforts unless there is clear benefit. Rapid migration in public health is often prohibited by cost.

- It may be possible to leverage considerable benefit from Stage 1 case reporting use cases by creating additional case reporting expectations of a highly similar nature, e.g., newborn hearing screening case reporting, cancer registry case reporting. Implementation profiles have already been at least partially developed for several of these. Vital records (e.g. birth and death record) reporting is a particular use case of this type, but the work group and Committee should be sensitive to the critical legal nature of such certifications and the need for timeliness and very high data quality.
- The long-term aim should be to enable and facilitate bilateral communication between health care providers and public health agencies. Rarely does a “case report” end with a single one-way transmission of data.
- The choices of standards to support inter-enterprise exchange should also be compatible with increasing the ability to reuse data inside each entity. In simpler terms, choose meaningful use cases that also increase the overall capability of public health information systems to exchange information among themselves.

We believe that the electronic transformation of population health should permit:

- Reduced reporting costs and labor for both healthcare providers and public health agencies
- Bilateral communication between public health and personal health care providers that adds real value to health care (enabling better prevention, diagnosis and treatment)
- Increased productivity, effectiveness and agility for a shrinking public health workforce (which will require technologies that exploit interoperability *within* health agencies)
- Empowerment and engagement of individuals to engage in effective prevention.

Ideally Stages 2 and 3 of meaningful use rules will address each of these, while adequate attention, organization, funding help public health agencies overcome their current limitations.

Thank you for considering this input.